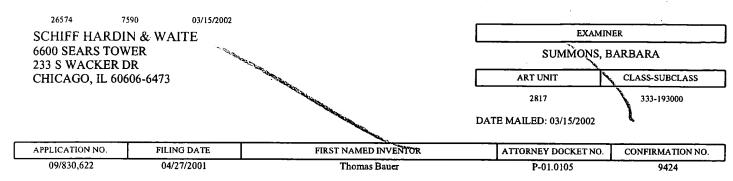
UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231 www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE



TITLE OF INVENTION: SURFACE ACOUSTIC WAVE ARRANGEMENT WITH A JUNCTION REGION BETWEEN SURFACE ACOUSTIC WAVE STRUCTURES HAVING STRUCTURES HAVING A DECREASING THEN INCREASING FINGER PERIOD

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	TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
	15	nonprovisional	NO	\$1280	\$0	\$1280	06/17/2002

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

#### HOW TO REPLY TO THIS NOTICE:

1. Review the SMALL ENTITY status shown above. If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

B. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

□ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# PART B - FEE(S) TRANSMITTAL

Complete and	l mail this form	together with	applicable fee(s), to:
Complete and	i illali ulis ivi ili	. LUZCINCI WILLI	abblicable recision to

**Box ISSUE FEE** 

**Assistant Commissioner for Patents** 

Washington, D.C. 20231

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEB and PUBLICATION FEB (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS	(Note: Legibly	mark-up with a	ny corrections or use Block 1	)
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26574

7590

03/15/2002

SCHIFF HARDIN & WAITE 6600 SEARS TOWER 233 S WACKER DR CHICAGO, IL 60606-6473 Note: The certificate of mailing below can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing.

Certificate of Mailing

I hereby certify tha United States Postal	t this Serv	Fice	ee(s)	Transr	nittal	is being	depos first cla	ited ass 1	with nail	in the
envelope addressed indicated below.	to	he	Box	Issue	Fee	address	above	on	the	date

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830 622	04/27/2001	Thomas Bauer	P-01.0105	9424

TITLE OF INVENTION: SURFACE ACOUSTIC WAVE ARRANGEMENT WITH A JUNCTION REGION BETWEEN SURFACE ACOUSTIC WAVE STRUCTURES HAVING STRUCTURES HAVING A DECREASING THEN INCREASING FINGER PERIOD

TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE		
15	nonprovisional	NO	\$1280	\$0	\$1280	06/17/2002		
EXA	AMINER	ART UNIT	CLASS-SUBCLAS	SS				
SUMMON	IS, BARBARA	2817	333-193000	<del></del>				
1. Change of correspor CFR 1.363). Use of PT but not required.	ndence address or indicat O form(s) and Customer	ion of "Fee Address" (37 Number are recommended	or agents OR, all	the patent front page, I o 3 registered patent atternatively, (2) the name	orneys 1			
□ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.			attorney or agent	single firm (having as a member a registered attorney or agent) and the names of up to 2				
"Fee Address" indi PTO/SB/47) attached	ication (or "Fee Address' l.	Indication form	registered patent a is listed, no name	attorneys or agents. If no will be printed.	name 3			

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

	•						
Please check the appropriate assignee category or c	ategories (will not be printed on the patent)	⊔ individual	☐ corporation or other private group enti-	ty 🚨 government			
4a. The following fee(s) are enclosed:	4b. Payment of Fee(s):						
☐ Issue Fee	☐ A check in the amount	☐ A check in the amount of the fee(s) is enclosed.					
☐ Publication Fee	☐ Payment by credit card	☐ Payment by credit card. Form PTO-2038 is attached.					
☐ Advance Order - # of Copies	The Commissioner is h Deposit Account Number	☐ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number(enclose an extra copy of this form).					
The COMMISSIONER OF PATENTS AND TRA application identified above.	DEMARKS is requested to apply the Issue Fee	and Publication	Fee (if any) or to re-apply any previously p	oaid issue fee to the			
(Authorized Signature)	(Date)		· · · · · · · · · · · · · · · · · · ·				
NOTE; The Issue Fee and Publication Fee (if rother than the applicant; a registered attorney interest as shown by the records of the United Sta Burden Hour Statement: This form is estimated t depending on the needs of the individual case. At to complete this form should be sent to the Chi and Trademark Office, Washington, D.C. 20231 FORMS TO THIS ADDRESS. SEND FEES Assistant Commissioner for Patents, Washington	or agent; or the assignee or other party in the Patent and Trademark Office.  o take 0.2 hours to complete. Time will vary my comments on the amount of time required of Information Officer, United States Patent DO NOT SEND FEES OR COMPLETED AND THIS FORM TO: Box Issue Fee,						
Under the Paperwork Reduction Act of 1995, collection of information unless it displays a valid	no persons are required to respond to a dOMB control number.						



#### United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20221 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,622	04/27/2001	Thomas Bauer	P-01.0105 9424	
26574	7590 03/15/2002		EXAMINI	ER
	DIN & WAITE		SUMMONS, B.	ARBARA
6600 SEARS TO 233 S WACKE			ART UNIT	PAPER NUMBER
CHICAGO, IL			2817	
	•		DATE MAILED: 03/15/2002	

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The patent term adjustment to date is 0 days. If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the term adjustment will be 0 days.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (http://pair.uspto.gov)



# UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

FILING DATE

ATTORNEY DOCKET NO.

EXA	MINER
ART UNIT	PAPER NUMBER
	6
DATE MAILED:	

This is a communication from the examiner in charge of this application. COMMISSIONER OF PATENTS AND TRADEMARKS

# **NOTICE OF ALLOWABILITY**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.
This communication is responsive to the Preliminary Armot & Proposed Daw. Cora Received 4/27/0
$\nearrow$ The allowed claim(s) is/are $16-30$
☐ The drawings filed on are acceptable as formal drawings.
Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
ŽAII □ Some* □ None of the:
☐ Certified copies of the priority documents have been received.
Certified copies of the priority documents have been received in Application No.
Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
*Certified copies not received:
☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE FOR SUBMITTING NEW FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION. This three-month period for complying with the REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL is extendable under 37 CFR 1.136(a).
Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
Applicant MUST submit NEW FORMAL DRAWINGS
because the originally filed drawings were declared by applicant to be informal.
including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No
including changes required by the proposed drawing correction filed on 4/27/01, which has been approved by the examiner.
including changes required by the attached Examiner's Amendment/Comment er in the Office action of Paper No.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings.
☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.
Any reply to this notice should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.
Attachment(s)
Notice of References Cited, PTO-892
Information Disclosure Statement(s), PTO-1449, Paper No(s).
☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152
Interview Summary, PTO-413
Examiner's Amendment/Comment
Examiner's Comment Regarding Requirement for the Deposit of Biological Material
Examiner's Statement of Reasons for Allowance

Application/Control Number: 09/830,622

Art Unit: 2817

**EXAMINER'S AMENDMENT/REASONS FOR ALLOWANCE/COMMENTS** 

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312.

To ensure consideration of such an amendment, it MUST be submitted no later than the payment

of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr.

James D. Hobart on March 12, 2002.

2. The following changes to the drawings have been approved by the examiner and agreed

upon by applicant: Figs. 1, 2, and 4(a) need to be labeled "Prior Art". Regarding Figs. 1 and 2,

see e.g. the specification at page 6, lines 34-37, and regarding Fig. 4(a), see e.g. the specification

at page 8, Ins. 25-27. Copies of Figs. 1, 2, and 4(a) with the agreed upon changes marked in red

ink are attached. In order to avoid abandonment of the application, applicant must make these

above agreed upon drawing changes.

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance:

Regarding the prior art of record cited on the PCT search report, the reasons for

allowance are as stated in the provided translation of the International Preliminary Examination

Page 2

Application/Control Number: 09/830,622

Page 3

Art Unit: 2817

Report. Regarding the other prior art references cited herein by the Examiner (see list below), whereas the prior art teaches varying the finger period within surface acoustic wave (SAW) structures, it fails to teach a "junction region" from a first to a second SAW structure with "the local finger period of the first surface acoustic wave structure initially decreasing continuously in the junction region and finally rising continuously again until the finger period of the second surface acoustic wave structure is reached" (see claim 16, the last 5 lines thereof).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### Comments

# The Specification and Claims:

4. It should be noted that the following changes have been made globally by the Examiner (i.e. by Informal Examiner's Amendment) to correct obvious translation-related typographical errors:

On page 2 of the specification, on each of lines 17 and 18, note that "red" has been changed to --rot--.

The same change has been made at page 4, line 32; page 10, line 1; and in claim 26, on line 2 (both occurrences).

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Art Unit: 2817

Apparently "rot" translates from German to English as --red--. However, where "rot" is used in a piezoelectric substrate specification, for example, "42° rot YX-LiTaO<sub>3</sub>" (see the original German PCT application at page 2, line 16), it is indicating a "rotation" angle which should remain as "rot" and not be translated literally.

# The Title:

5. It should be noted that the Title of the Invention has been changed to:

--SURFACE ACOUSTIC WAVE ARRANGEMENT WITH A JUNCTION REGION BETWEEN SURFACE ACOUSTIC WAVE STRUCTURES HAVING A DECREASING THEN INCREASING FINGER PERIOD--

(see e.g. the last 5 lines of claim 16).

# The Prior Art:

- The references cited on the PCT search report have been included on the accompanying form PTO-892 to indicate that they have been considered. Copies are not being sent to Applicants.
- 7. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

Application/Control Number: 09/830,622

Art Unit: 2817

Kato et al. U.S. 5,256,927 [see e.g. Fig. 1(a)]; Lewis et al. GB 2 160 048 (see e.g. Figs.

Page 5

5A, 5B, and 5C); and Yamanouchi et al. EP 0 579 871 (see Fig. 1) each disclose SAW

transducers with increasing or decreasing periods.

Fleischmann DE 41 26 335 discloses a SAW resonator with a "continuously changing

geometry period" in the edge region of the reflectors (see the abstract, the last six lines thereof).

Matsuda et al. JP 11-88112 discloses a SAW resonator with the period of the reflectors

varying "at random" (see the abstract, the last five lines thereof and Fig. 1).

Takagi et al. JP 10-335966 discloses a SAW transducer with the finger period in the

center being different from the finger period of both sides (see Fig. 1 and the abstract, the last

eight lines thereof).

8. Any inquiry concerning this communication should be directed to Barbara Summons at

telephone number (703) 308-4947, FAX no. (703) 308-7724, receptionist's no. (703) 308-0956.

March 12, 2002 : BSummons

(1 attachment)

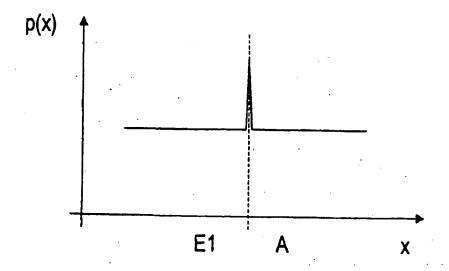
Robert Page and Examiner

Technology Center 2800

09/830622

In Out E2 R2

FIG 2 PRIOR ART



2/3

Approved
3/12/02
BS

FIG 3

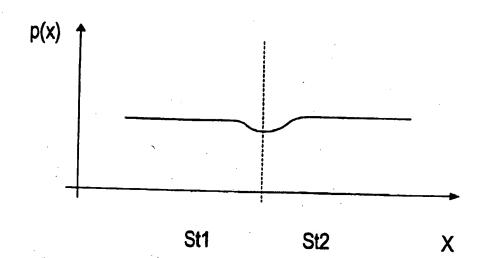
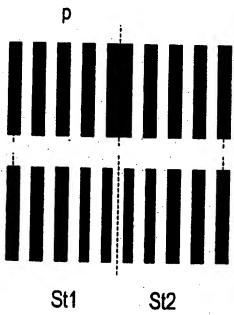


FIG 4

FIG-4a) PRIOR ART

F164b)



X